

A comprehensive brine database that can be used for CO₂ sequestration studies has been prepared by researchers at the National Energy Technology Laboratory (NETL). Sources for this extensive database include: a preliminary brine database tabulated by the Texas Bureau of Economic Geology under contract with DOE that consists of some two hundred and fifty tabulated wells; the extensive brine database tabulated by the U.S. Geological Survey that includes data on over 63,000 brines was provided to NETL for inclusion; and, an additional seven hundred plus well data sets provided by various State Geologic Surveys, oil and gas reports, and other published literature sources have been added to the database by NETL researchers.

Data obtained from the various sources were generally inconsistently recorded with regard to the variables sampled and reported in the respective reports. As the data from these sources were compiled, they were sorted for the variables most common among the formations, including Na⁺, Cl⁻, Ca⁺⁺, Mg⁺⁺, SO₄⁼, HCO₃⁻, Fe⁺⁺, pH, temperature, depth, and the latitude and longitude of the sampled wells. It is critical that consistent data among the variables, wells, and basins be compiled for numerical analysis of brine chemistry and other geologic parameters, so that the complete database can be assessed. Wherever possible, missing data have been obtained from a variety of additional literature sources that relate to oil/gas brine field formations. These data are compiled in a format which permits the NETL database to be directly imported into a variety of commercially available software packages for statistical or spatial analyses. The final compiled database provides the opportunity to access these data to conduct research on the geological sequestration of CO₂ within brine environments. This database also provides a unique compilation of brine chemistry and other geologic parameters for other quantitative analyses for United States oil and gas field formations.

To obtain a copy of the NETL Comprehensive Brine Database on CD-ROM, please contact James.Knoer@netl.doe.gov or Robert.Eldstrodt@netl.doe.gov and include your full contact information including telephone, organization, mailing address, and email address.

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